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09/824,951	04/03/2001	James Ching-Liang Huang	71795/10961	1569

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EXAMINER

PEREZ DAPLE, AARON C

ART UNIT PAPER NUMBER

2154

DATE MAILED: 06/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/824,951

Applicant(s)

HUANG, JAMES CHING-LIANG

Examiner

Aaron C. Perez-Daple

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 71-83 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 71-83 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This Action is in response to Amendment filed 2/22/05, which has been fully considered.
2. Claims 1-70 have been cancelled by Applicant.
3. New claims 71-83 are presented for examination.
4. This Action is made FINAL.

Claim Objections

5. **Claim 71** is objected to because of the following informalities: lines 6-7 of the claim recite, "the determining step find no OSI Layer 3 switches" where it should recite -- the determining step finding no OSI Layer 3 switches--., Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
7. **Claims 71-74** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "lowest" in claim 71 is a relative term which renders the claim indefinite. The term "lowest" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. In particular, it is not clear how the "lowest" switch identification is determined. In order to understand the claim, it is also necessary to

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understand how the switch identifications are assigned (e.g. round robin, user specified, random, etc.). Therefore, the claim also omits the essential step of assigning the switch identifications.

For clarity, lines 4-5 should also recite that the selection is performed responsive to the determining step *finding OSI Layer 3 switches*.

8. As dependent claims, claims 72-74 suffer from the same deficiencies as claim 71.
9. **Claims 75-78** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As presently worded, lines 6-7 of claim 75, which recite, "assigning every OSI Layer 2 switch to the OSI Layer 3 switch that is closest as a head router," are unclear. In particular, it is not clear which switch is being claimed as the head router, nor how this relates to the "head router" previously recited in line 5. Based on Applicant's specification, the Examiner interprets that Applicant intends to claim, "assigning as a head router to every OSI Layer 2 switch the OSI Layer 3 switch that is closest." For clarity, the claim should also recite that each switch is assigned a head router. For example, by inserting after line 4, "assigning to each switch of the plurality of switches a head router as follows...."

The term "closest" in line 6 of claim 71 is a relative term which renders the claim indefinite. The term "closest" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. In particular, it is not clear how the distance between the switches is measured or indicated for determining which switch is

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closest. Therefore, the claim is also missing the essential step of determining the distance between switches (e.g. such as from a topology map).

10. As dependent claims, claims 76-78 suffer from the same deficiencies as claim 75.
11. **Claims 80-82** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Specifically, line 2 of claim 80 recites that the unicast packet has an “unknown address.” It is not clear in what sense the address is “unknown” nor what particular system elements the address is unknown to. Does the Applicant intend to claim, for example, that the address is not found in one of the local or remote databases (and, if so, which one)? For the purpose of applying prior art, the Examiner interprets that any teaching of broadcasting the unicast packet to all ports in response to being unable to determine the particular port for the address is sufficient to anticipate the limitation of the claims.

12. As for claim 81, it is not clear what is meant by the phrase “responsive to the means for broadcasting.” First, what is being claimed as being responsive? From the claim, it appears that the means for broadcasting is being claimed as responsive to itself. Second, what is it responding to (e.g. a message, a request, etc.)?
13. As dependent claims, claims 81-82 suffer from the same deficiencies as claim 80.

Claim Rejections - 35 USC § 102

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

15. **Claims 79 and 83** are rejected under 35 U.S.C. 102(e) as being anticipated by Kanekar et al. (US 6,751,191 B1) (hereinafter Kanekar).

16. As for claim 79, Kanekar discloses a stacked switch system having a plurality of switches, the plurality of switches comprising:

means for maintaining a local switch database (L2 spanning tree databases 910, 912, Fig. 9), the local switch database comprising the MAC address and port identification of MAC addresses learned locally (col. 2, line 52-col. 3, line 4; col. 9, lines 12-36);and

means for maintaining a remote switch database (L2 tables 920, 926, Fig. 9), the remote switch database comprising the MAC address and switch node identification of addresses learned through another switch node (col. 3, lines 16-33; col. 9, lines 12-36).

17. As for claim 83, Kanekar discloses a stacked switch system according to claim 79, further comprising:

means for maintaining a switch identification table containing the switch identification of switching nodes in the stacked switch system and corresponding ports utilized to reach the switching nodes (col. 3, lines 16-33).

Claim Rejections - 35 USC § 103

18. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

19. **Claims 80-82** rejected under 35 U.S.C. 103(a) as being unpatentable over Kanekar in view of Schnell (US 5,923,654).
20. As for claims 80 and 81, although arguably inherent to Kanekar for the case when an address is not located in either the local or remote databases, Kanekar does not explicitly disclose broadcasting a unicast packet with an unknown address to all ports in the system. Schnell discloses broadcasting a unicast packet with an unknown address to all ports in the system for the purpose of discovering the unknown address (col. 11, lines 5-27). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Kanekar by broadcasting a unicast packet with an unknown address to all ports in the system for the purpose of discovering the unknown address, as taught by Schnell above.
21. As for claim 82, Kanekar discloses a stacked switch system according to claim 81, further comprising:

means for updating the remote switch database with the address of a the unicast packet and the switch node identification of the switch node knowing the address (col. 3, lines 16-33; col. 9, lines 12-36).

Response to Arguments

22. Applicant's arguments with respect to new claims 71-78 are moot in view of new grounds of rejection.

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23. Applicant's arguments filed 2/22/05 with respect to claims 79-83 have been fully considered but they are not persuasive. Specifically, Applicant asserts that Kanekar fails to disclose both a local and a remote database. The Examiner respectfully disagrees. Referring to Fig. 9 as further detailed in the rejection above, Kanekar explicitly discloses that each switch in the stack has both a local database (910, 912) for forwarding data locally and a remote database (920, 926) for forwarding data to remote switches on the network. Whether or not these databases are synchronized has no direct bearing on the claims. Therefore, Kanekar directly anticipates each limitation of the claims, which are properly rejected under 35 USC 102.

Conclusion

24. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

US 6,473,403 B1, note teaches broadcasting an unknown unicast packet to each port on a network;

US 6,337,863, note teaches broadcasting an unknown unicast packet to each port on a network;

US 6,189,039 B1, note abstract;

US 6,055,561, note abstract;

US 5,49,720, note teaches local and remote databases.

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25. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


26. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron C. Perez-Daple whose telephone number is (571) 272-3974. The examiner can normally be reached on 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on (571) 272-3964. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access

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(toll-free).

 6/4/05

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